

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

Coloured covers/  
Couverture de couleur

Coloured pages/  
Pages de couleur

Covers damaged/  
Couverture endommagée

Pages damaged/  
Pages endommagées

Covers restored and/or laminated/  
Couverture restaurée et/ou pelliculée

Pages restored and/or laminated/  
Pages restaurées et/ou pelliculées

Cover title missing/  
Le titre de couverture manque

Pages discoloured, stained or foxed/  
Pages décolorées, tachetées ou piquées

Coloured maps/  
Cartes géographiques en couleur

Pages detached/  
Pages détachées

Coloured ink (i.e. other than blue or black)/  
Encre de couleur (i.e. autre que bleue ou noire)

Showthrough/  
Transparence

Coloured plates and/or illustrations/  
Planches et/ou illustrations en couleur

Quality of print varies/  
Qualité inégale de l'impression

Bound with other material/  
Relié avec d'autres documents

Continuous pagination/  
Pagination continue

Tight binding may cause shadows or distortion along interior margin/  
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Includes index(es)/  
Comprend un (des) index

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/  
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Title on header taken from:/  
Le titre de l'en-tête provient:

Title page of issue/  
Page de titre de la livraison

Caption of issue/  
Titre de départ de la livraison

Masthead/  
Générique (périodiques) de la livraison

Additional comments:/  
Commentaires supplémentaires:

This item is filmed at the reduction ratio checked below/  
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

THE  
CANADIAN AGRICULTURAL JOURNAL.

VOL. II.

MONTREAL, JULY 1, 1845.

No. 7

MILDEW IN WHEAT.

The attention of our readers can hardly be directed to a more important subject than the cause of the prevalence in certain districts of the *Mildew in Wheat*. In another column it is stated that certain parishes in Middlesex, once celebrated for the quality of their wheat are now much infested with this disease, and produce, under the present system of cultivation, a great bulk of wheat straw with an occasional large yield of corn, but very rarely of a good sample. This change we once heard ascribed by an old labourer, a native of one of those parishes, to the alternate system of cropping, which commenced as the land began to be inclosed from a state of common-field; There had been no good wheat grown, he said, since they gave up the good old system of three corn crops and a fallow; and there is, perhaps, more truth in the remark than may at first be apparent. Mildew has been shown by naturalists to be a minute fungus, whose germs are floating in the atmosphere, and only require, for their development, a particular condition of the surface of whatever plant they attack. Thus, their growth is, doubtless, favoured—perhaps insured—by the exudation of sap from the ruptured vessels of the wheat plant, on which they may alight. This rupture may be caused by a plethoric state of those vessels—perhaps, also, by a deficiency of silex in the epidermis of the straw; and this condition is brought on by whatever occasions a great flow of sap, or causes it to continue too long; and the indications of it are a deep green colour in the leaves and straw, and the continuance of this dark green colour a few inches below the ear after the chaff has begun to turn off. When this symptom appears, a bad case of mildew is inevitable.

That the excessive use of nitrogenous manures will produce this disease is evident, from the mildew which follows the use of nitrate of soda and guano, on rich soils and in growing seasons, as a dressing for wheat—from that also, which attacks the wheat growing on the sites of dunghills, when other parts of the field are free from it—and also from the usually diseased state of wheat grown in highly cultivated gardens. A continuance of warm and humid weather, which produces a rapid and luxuriant growth of leaf and straw, and keeps the plant in this state when the grain ought to be approaching maturity, is highly favourable to the development of mildew. Now, the common-field system of cultivation was eminently calculated to discourage anything like luxuriance of growth; and it is probable that it would generally produce on a naturally good soil a light crop, but of a good sample. The market-garden system of farming, like high farming generally, has just the opposite tendency; it induces that luxuriance of growth which predisposes for the reception of the disease. To the excessive use, then, of London dung, with its large supplies of ammonia and carbonic acid, we may attribute the prevalence of mildew in the district under consideration. The redundancy of these substances in the soil is aggravated by the supplies of them with which the atmosphere round London for many miles is loaded. As a palliative for the disease when it has commenced, early cutting is resorted to. The excessive flow of sap which, instead of reaching the grain goes to the nourishment of the fungus, is thus cut off, and sufficient remains in the straw to enable the grain to consolidate; and instead of a shrivelled kernel, all bran, one that is at any rate half filled is obtained.

Winter-sown wheats which have lost plant, and which tillered excessively, producing a thin and irregular crop, continuing green at the ears when other crops are ripening, are peculiarly liable to the disease. Early and thick sowing is therefore recommended as a preventative, and the result in seasons when these thick crops of weak straw can keep their legs till they are nearly ripe, is a great bulk both of straw and corn. But in dripping seasons, or when heavy thunder storms occur before the ear is well filled, such crops are sure to be laid, and this conspires with mildew to reduce the five, six, or seven quarters per acre, to three or fewer, leaving the grower to console himself if he can, with the adage that "lodged crops never ruined a farmer."

To these remarks, which, though they have special reference to the neighbourhood of London, are nevertheless, we believe, generally true, we add an extract from the second volume of the English Agricultural Society's Journal:

"On the precautions to be taken against Rust and Mildew.—I do not think it has been clearly determined by experiment, whether the sporules of the root and mildew fungi are absorbed by the roots of corn, like those of the bunt and smut fungi; or whether (which seems to be the more prevalent idea) they enter through those minute pores on the stem and leaves which botanists term *stomata*. The fungi at first makes their appearance in little cavities scraped immediately beneath these pores, which certainly looks very much as if the sporules entered there. The stomata are naturally exhaling organs, continually discharging, under the influence of light, a large proportion of the water imbibed by the root. But in moist weather this function is impeded, if, in some cases, it be not actually reversed; when it would be easy for the sporules to enter these invisible stomata, with the moisture imbibed by them. The fact, however, stands in need of proof; and hitherto the evidence is more in favour of similar fungi being imbibed by the roots of the plants which they attack. Mr Knight, indeed who is high authority, particularly insists upon mildew being induced by foggy weather, happening at a time when the ground is particularly dry—circumstances which we may readily understand as likely to convert the stomata (or even the whole superficial tissue of plants) into imbibing organs. If the autumnal fogs really predispose wheat to the attack of the mildew fungus, we must agree with those who recommend the growth of early varieties in places subject to these fogs. It seems to be pretty generally admitted that spring wheats are less liable to mildew than winter wheats, and that heavy soils are less subject to it than light ones. But, at present, the information on these points is very vague and unsatisfactory. We may safely conclude that a generally healthy state of the plant, without any over luxuriance of vegetation, is most likely to secure a crop against the attacks of the rust and mildew fungi; but whatever tends to render the plant sickly, whether it be excess of heat or cold, drought or wet, sudden changes of temperature, poverty of soil, over-manuring, shade, &c., must be considered as a predisposing cause to these diseases."—E. W.—*Agricultural Gazette*.

SKILFUL CULTIVATION.

The farm of Henry Skelton, Esq., called Braham Grange, situate about a mile to the south of Thonon,

and half a mile to the north of the Leeds and Tadcaster turnpike road, does at present supply such instruction in the cultivation of land that the public would lose a great benefit were it not pointed out.

I well remember Whin Moor more than forty years since, of which this now most fertile farm formed one of the most barren parts. It was a district cold and sterile, the substratum a very stiff clay, tenacious of all the rain that fell, the surface a kind of black earth that then seemed unfit for human habitation. Nothing could be more unpromising in appearance, and although the price of grain was excessive soon after the inclosure of Whin Moor, the price of this land did not then exceed £10 per acre. From the present character of some adjoining farms, but in the hands of cultivators of another kind, some notion may be formed of what Mr. Skelton's farm once was, although the crops now growing thereon will bear comparison with those of the most luxuriant and fertile districts. It is not solely because of the abundance of produce that this farm is worthy of notice.

2. It supplies an illustration of the effects of manures, for almost every field (as I was told by the most intelligent experimental cultivator) was this year differently manured in different parts. Here may be seen what rape dust, compost, animal and vegetable substances, and above all, what guano will effect. Guano used at the rate of two hundredweight per acre, which costs seven shillings per cwt., has given a growth and luxuriance to all kinds of grain, to turnips, and to grass, which supplies proof that guano may be brought from the Pacific Ocean, and from the most distant parts of the world, and applied at a cheaper rate than other kinds of manure can be collected at home. Science and industry may make further discoveries, and it is not improbable that the qualities which fructify in guano may be readily produced at a very much cheaper rate.

3. Mr. Skelton shows how this produce may be turned to the most advantage to the support of animals, and to make lean cattle fat. He chops his straw and boils his turnips, mixes the boiled turnips with the chopped straw, and pours the liquid upon the compound. This, with a small quantity of linseed cake, he finds most nutritious both to the cattle and sheep. By this means of feeding, the same quantity of food nourishes and feeds more than double the number of animals which the raw turnip and straw in its natural state would do; and by this means his yard is filled with excellent manure.

4. Here is exhibited the fact that science and capital applied to agriculture find employment and administer the means of comfortable maintenance to the most deserving and industrious class—the agricultural labourer. The amount of wages for labour on this farm is not less than 2*l.* per acre.

5. Here is an example that Providence is bountiful to the industrious, and that no spot can be found which may not be made a field of labour; and that the skillful application of capital to agriculture will, at all events, supply to individuals the necessaries of life. Agriculture, like trade and speculation, which is a species of gambling, does not produce great and almost immediate changes in the condition of individuals; nevertheless, when followed with skill and industry, it supplies food convenient for the service of man, and perhaps places him, considered as a passenger through this world to another, in the most desirable circumstances of life.—*Leeds Intelligencer.*

#### YOUNG'S ANNALS OF AGRICULTURE.

In the 17th vol. of Young's Annals of Agriculture, published as long ago as 1792, a Mr. John Chamberlain thus writes to Mr. Young:—

"The process of making Cheshire cheese is as follows, viz., on a farm capable of keeping 25 cows, a cheese of about 60 lbs. weight may be daily made in the months of May, June, and July.

"The evening's milk is kept untouched until next morning, when the cream is taken off, and put to warm in a brass pan, heated with boiling water; then one-third part of that milk is heated in the same manner, so as to bring it to the heat of new milk from the cow, (note this part of the business is done by a person who does not assist in milking the cows during the time.) Let the cows be milked early in the morning, then the morning's new milk and the night's milk, thus prepared, are put into a large tub, together with the cream; then a portion of rannet, that has been put into water milk-warm the evening before, is put into the tub, sufficient to coagulate the milk; and at the same time, if arrotta be used to colour the cheese, a small quantity, as requisite for colouring (or a marigold or carrot infusion,) is rubbed very fine and mixed with the milk, by stirring all together, then covering it up warm, it is to stand about half an hour, or until coagulated; at which time it is first turned over with a bowl, to separate the whey from the curds, and broken soon after with the hand and bowl into very small particles; the whey being separated by standing some time, is taken from the curd, which sinks to the bottom; the curd is then collected into a part of the tub, which has a slip or loose board to cross the diameter of the bottom of it, for the sole use of separating them, and a board is placed thereon, with weights from 60 to 120 lbs., to press out the whey; when it is getting into a more solid consistence, it is cut and turned over in slices for several times, to extract out all the whey, and then weighted as before, which operations may take about an hour and a-half. It is then taken from the tub, as near the side as possible, and broken very small by hand, and salted and put into a cheese vat, enlarged in depth by a tin hoop to hold the quantity, it being more in bulk than when finally put into the press. Then press the side well by hand, and with a board at top well weighted, and placing wooden skewers round the cheese to the centre, and drawing them out frequently, the upper part of the cheese will be drained of its whey; then shift it out of the vat, first put a cloth on the top of it, and reverse it on the cloth into another vat, or the same, which vat should be well scalded before the cheese is returned into it; then the top part is broken by hand down to the middle, and salt mixed with it, and skewered as before, then pressed by hand, weighted, and all the whey extracted. This done, reverse the cheese into another vat, warmed as before, with a cloth under it; then a tin hoop, or binder, is put round the upper edge of the cheese, and within the sides of the vat, the cheese being first inclosed in a cloth, and the edges of it put within the vat.

"N.B. The cloth is of fine hemp, a yard and a-half long by 1 yard wide; it is so laid, that on one side of the vat it shall be level with the side of it, on the other it shall lap over the whole of the cheese, and the edges put within the vat, and the tin fillet to go over the whole. All the above operations will take from seven in the morning till one at noon. Finally, it is put into a press of 15 to 20 cwt. and stuck round the vat into the cheese with thin wire skewers, which are shifted occasionally; in four hours more it should be shifted and turned, and in four hours more the same, and the skewering continued. Next morning let it be turned by the woman who attends the milk, and put under another or the same press, and so turned at night and the next morning; at noon, taken out finally to the salting room; there salt the outside, and put a cloth binder around it. The cheese should, after such salting, be turned twice a-day, for six or seven days; then left two or three weeks to dry, turned and cleaned every day, taken to the common cheese room, laid on straw on a boarded floor; and daily turned, until grown hard. The room should be moderately warm, but no wind or draft of air should be permitted, which generally cracks them. Some rub the outside with butter or oil, to give them a coat.

"The spring made cheese is often shipped for the London market in the following autumn, and it is supposed to be much ameliorated by the heating on board the vessel."

**FIBROUS COVERING STIMULATES VEGETABLE GROWTH.**

A light covering of *straw*, for instance, on grass land, for instance, will stimulate its growth in an extraordinary degree; much more, it would appear, than can be accounted for on the supposition that the ground is thus kept moist in dry weather. As I have not seen much reference hitherto to this subject in your columns, I send you the annexed answers to questions put by me to G. Gurney, Esq., of Woodleigh, Cornwall, who first directed attention to this subject:

1. What crops has the process hitherto been tried on with success?

Ans.—Meadow grass, clover lea, vetches, and wheat.

2. At what period of the year is it best to apply the covering?

Ans.—From the beginning of April to the end of October.

3. Is the covering allowed to remain on until the crop is ready for cutting, i. e. supposing grass to be the crop?

Ans.—It is generally removed three or four days previous to cutting. It is lifted, that is, raked up, and re-laid about every three weeks, while the grass is growing.

4. What material is used in covering?

Ans.—Wheat straw, oat straw, rushes, or brushwood.

5. What weight of material should be used?

Ans.—25 cwt. per statute acre.

6. What instances of success has the process met with in your experience?

Ans.—They are very numerous; there is not an instance on record where it has failed, except where too great a quantity has been used, or which is by far the more general, where too little had been applied. Most persons on first using fibrous covering, are afraid of using too much.

To this I add a few more sentences from a letter with which I have been favoured from Mr. Gurney:

"If you lay about 20 lbs. of wheat straw lightly over a piece of clover lea or meadow grass, of 18 feet long by 18 feet wide, you will very soon see the singular action of fibrous covering; rake it off in about a fortnight, and relay it; observed the change produced on the piece, compared with that of the other parts of the field."

I must also add the following paragraph on this subject, from the *Cornwall Gazette*, being a report of the discussion on this subject, at a late meeting of the North Cornwall Experimental Club:

"The Rev. W. Wright said he had this year produced considerable increase in the growth of vetches by the fibrous covering; on other herbage its effects were as gratifying as last year.

Mr. Rowe said that grass at Poughill, with the fibrous covering, had grown, within three weeks, four inches more than that without; that in one of the midland counties a ton and a half of wheat straw per acre, had produced within the last month two tons of grass."—*J. M., in London Agricultural Gazette.*

**TOP-DRESSING FOR GRAIN CROPS.**

The *London Agricultural Gazette* quotes the following conclusions deduced by Mr. John Hannam, whose experiments obtained the first prize of the Highland Agricultural Society. Mr. Hannam's investigations show—

1st—That *nitrate of soda, nitrate of potash, and soot*, have a tendency to increase the produce of wheat, both straw and grain.

2d—That *common salt* has a slight tendency to increase the quantity of grain, and to decrease the weight of straw; and that it increases the weight per bushel of the grain, and hence it may be advantageously used as an auxiliary to other manures.

3d—That *sulphate of soda* has no visible effects upon the wheat crop.

4th—That *ammoniacal liquid, from the gas works*, has an astonishing tendency to increase the produce of wheat.

5th—That *nitrate of soda* may be applied with the greatest advantage as a top-dressing for winter wheat, which does not answer our expectations at spring.

Conclusions of a similar nature are deduced from several other experiments with the same substances. Mr. Gardiner's experiments (*Trans. Highland Ag. Soc., July, 1844.*) led him to conclude—

1st—That all dressings and manures containing a large per centage of nitrogen, as guano, rape dust, salts of ammonia, nitrates of soda, &c., make the grain grown by them lighter in weight per bushel, while at the same time they give more bushels per acre, as well as more straw.

2d—That, on the other hand, such manures as common salt, give heavier grain per bushel, but fewer bushels per acre.

3d—That if the same be found true on all soils, the most judicious and economical method is, to use a mixture of these, as common salt with nitrate of soda, or any of the others; the one will give *quantity*, while the other will give *weight*.

4th—That guano does not lessen the weight of grain quite so much as the nitrates of soda and potash, and that a mixture of it with salt would, there is reason to believe, become one of the best dressings for wheat crops.

5th—The salt will, in places far from the sea, in general be found advantageous as a dressing on grain crops.

6th—That guano is a universal manure, and has, in all cases, been found an acquisition."

**SULPHATE OF LIME, OR GYPSUM.**

This substance, which is a compound of sulphuric acid and lime, is found in abundant quantities in a native state, both for the purpose of agriculture and the arts; and it has been recommended for the same purpose as the muriate of lime, viz. the fixing ammonia; but is infinitely inferior for that purpose, in consequence of its difficult solubility—at the temperature of 66 deg., one part of gypsum only being soluble in 460 parts of water, to obtain which, however, the gypsum must be finely divided, and macerated for a great length of time. Its more obvious use in agriculture is, however, as a direct food to certain plants, either as supplying the sulphate of lime, or, by its decomposition, affording the sulphur necessary to the due development of certain plants, such as the Crucifera, &c. The following table, extracted from "Sprenge's Analyses," shows the quantity of lime and magnesia, in 100,000 parts in several of our ordinary crops:—

	Lime.	Magnesia.
Wheat, ...	96	69
Barley, ...	106	180
Oats, ...	86	67
Potatoes, ...	33	32
Cabbage, ...	1822	202
Swedish turnips, ...	835	282
Wheat straw, ...	240	32
Barley do. ...	554	76
Oat do. ...	152	22
Red clover, ...	584	70
Beet, ...	285	133
Turnips, ...	127	22

The above table may not be strictly accurate, but I believe it approximates to the truth, and certainly agrees with my own practical observations respecting the exhausting powers of different crops on various soils. Cabbages are known to be one of the most scouring crops grown, and we see from the above table, that both it and Swedes require a large amount of the sulphate of lime; the next is red clover, and the application of gypsum to the clover crop, on lands sparingly endowed with this substance, has been so repeatedly treated of, that it is unnecessary to enlarge on its usefulness.—*Journal Highland Agricultural Society, Scotland.*

**SO-CALLED STIMULATING MANURES.**

And now the true action of those saline substances, hitherto called stimulants, became more clearly manifest. They no longer appeared to act like wine upon the human body, exciting to an unnatural effort, which was afterwards succeeded by languor, febleness and depression.

They were acknowledged really to feed the plant, since they supplied those things out of which its several parts were built up, and without which they could not be satisfactorily completed. And if the soil was less productive in after years, in consequence of the application of these substances, it was because the crop had extracted from the soil more than the manure had given to it. The so-called stimulant supplied pot-ash, or soda, or lime only, to the soil, and, getting these readily, the plant grew rapidly; but it gathered out of the soil, at the same time, magnesia, sulphur, and phosphorus, without which it could not grow. The large crops which were taken off, therefore exhausted the soil of these latter substances; and unless these were added again in some form or other, the soil must remain impoverished, and more or less unproductive. If the builder have abundance of stone or bricks, and we give him mortar in addition, his walls and houses will rise rapidly; but the faster they rise, the sooner will the bricks be exhausted; and when this happens, we shall look in vain for an advance in his work, if we continue to supply him with mortar only. Give him a new supply of bricks, however, and he will start afresh. So it is with the soil. The so-called stimulants excite the plants after the same manner that the mortar excites the builder—leave behind a languor or exhaustion of a similar description, to be removed, also, after a similar manner.—*Edinburgh Review.*

#### DARLINGTON FARMERS' CLUB.

At the monthly meeting of the Darlington Farmers' Club, held on Monday last at the office of Mr. Dixon, Land-agent, Edmund Blackhouse, Esq., of Polam Hill, Darlington, was elected a member of the club. The subject under discussion was "The best method of destroying coltsfoot and other deep-rooted weeds." In the absence of the chairman, Henry Chapman, Esq., who has been for some time prevented by illness from attending the meetings, the vice-chairman presided, and on introducing the subject, observed that coltsfoot, he believed, was a weed which was very difficult to eradicate; for, however well certain descriptions of land might be cultivated and cleaned, yet, if addicted to the growth of this weed, it would frequently make its appearance in the crops in spite of everything that could be done; and therefore, if any member present could throw any new light upon the subject which would assist in its eradication, he would certainly render a very desirable service to the meeting. After an animated conversation of considerable length, the meeting was of opinion that coltsfoot, being a perennial and very deep-rooted weed, and one which the members believe is propagated both by seed and by the division of the roots, a very small particle of which roots, when separated, will grow. It was unanimously resolved that the most effectual mode known of keeping down coltsfoot and other deep-rooted weeds was to plough deep and cultivate the land thoroughly and well, taking care to gather off every particle of the roots which can be found; and in growing crops, or wherever coltsfoot makes its appearance on the land, always to take care to hoe it up, or cut off the flower to prevent it from seeding. The following subjects were then adopted for the next three months' discussion;—June 23rd, "On the hoeing and management of the turnip and potato crop;" July 21st, "Lime and common salt: their uses and application as manures, either singly or in combination with other substances;" August 18th, "The comparative advantages and profitable cultivation of old grass land, as compared with arable land of similar quality."

#### PARK FARM, WROTHAM, KENT, JUNE 10, 1845.

"I see by the newspapers that you are advocating the system of deep-draining. Now, as there is a great deal of draining about to be done throughout the country, I think the landowners and farmers should pause a little before they go into this work to any extent, and should endeavour to ascertain the best and most effectual mode

of doing it. Practice and experience have taught me to have the drains from 42 to 50 inches deep, and from 24 to 34 feet apart in the strongest clays; and from 48 to 60 inches deep; and from 50 to 60 feet apart in soil of a more porous character. Such draining will lay the land perfectly dry; and no one can conceive the benefit arising from deep drains compared with shallow ones, unless they have experienced it both in crops and tillage. I will endeavour to explain to you how I have been draining for these last 30 years, and what the results have been. My idea at first was that I could not go too shallow; and accordingly I put my drains from 20 to 24 inches deep; but finding very little benefit from so doing, I was induced in the year 1830 to drain a field 3 feet deep, that had previously been already drained only 2 feet. To my surprise I found the shallow drains became useless. I then tried a drain of 4 feet in the same field, and found that this deepest drain, after rain, always ran the first and the longest carrying off more than double the quantity of water.—This conviction I felt made so strong an impression upon me, that for the last 15 years I have been draining my land, that was drained 2 feet deep, over again 4 feet, and with the same satisfactory result as in the instance just cited. I put my drains perpendicular, that is to say, up and down the field, to bring both sides into action; and although I was at first censured by many for pursuing this plan, the same parties are adopting it, being convinced by the stubborn facts they have witnessed as my results. Before my land was deep-drained, it had always furrows to take the top water away; now, however, I have none, for by taking the bottom water away, the top will follow. I could give you volumes of proof on this subject, having done a great deal for landowners at several places. I will mention a gentleman in Hertfordshire, who came to inspect my drains last year, and saw their good effects. He wished me to drain one of his farms: I did so, taking a man with me who understood the work. I met some farmers there, who said I must be insane to think that the water would get through so strong a soil into a drain so deep; and yet I have now the tenant's letter in my possession, informing me the plan had perfectly succeeded; that the deep drains ran like a pump, and that one of his neighbours had sent to borrow his draining-tools for the purpose of making similar drains. I should be happy to receive a visit from yourself, or any other gentleman, and show the benefit of deep-draining compared with that of shallow. About three years ago, the subject of drainage was brought forward at the Maidstone Farmer's Club, when I stood alone in advocating deep draining; it was again introduced a short time since, when many had become converts, and stated that they would not lay their drain tiles shallow, even if their landlords would give them leave to do so.—THOMAS SPENCER."

*Agricultural Buildings.*—Mr. Charles Miles, of 15, St. James square, communicated to the Council a paper containing a review of building and mechanical appliances, appliances for agricultural purposes, and various plans and drawings illustrative of his proposed arrangements; his suggestions having reference to the following topics:—

1. The internal and external drainage of the land on which the farm-buildings, &c., are erected.
2. The collection of rain water in a tank,
3. The conveyance of liquid manure into tanks by means of water-tight drains.
4. The adoption of hollow concrete walls where good brick and stone cannot be obtained on reasonable terms.
5. New asphalted floors throughout, cheap, durable, and water-tight.
6. New and improved construction of weather and fire proof roofs, without incurring an additional outlay.
7. Application of heat to water in the preparation of food, and warmth, and ventilation to the air in all situations where required.
8. The employment of horse or engine-power for general purposes.
9. Improved mode of separating and storing grain.

10. General arrangements of the farmstead, and of the farmer's and labourer's houses; plan for carrying offsmoke and removing soot to be applied to the land; new mode of hanging doors, so as to allow ingress and egress with ventilation, but without draught.

In reference to an inquiry made by Mr. Ricardo, of Gatecombe, near Minchinhampton, as to the best mode of laying down an asphaltic or bituminous flooring in his pigsties, Mr. Parkins informed the Council that he had found the following composition very useful for that purpose, namely, lime or powdered chalk mixed with so much coal-tar from gas-works as will leave the mixture in a state not too soft for ramming, adding a sufficient quantity of sand or fine gravel to bind the whole. Mr. Parkins, stated that these materials not only formed a hard basis for pigsties, farmyards, &c., but made good walks on which weeds would not grow, and answered the purposes generally for which asphaltic was commonly employed.

Lord St. John informed the Council that the plans of his farm premises, at Melchbourne, presented by him to the Society at a former meeting, referred to an occupation of 500 acres of land, about half of which was under the plough.

Col. Elwood, of Clayton Priory, near Brighton, favoured the Council with some suggestions in reference to Captain Scobell's plan of cottages at High Littleton, in Somersetshire, presented to the Society at the general meeting.

**Chinese Cabbage.**—Mr. Langdale, of Gower-street, Bedford-square, presented to the Council some of the seeds of Endive-Cabbage, from Chusan, as the only supply which, up to the present time, had been received in this country. From the report of Mr. Boyd it appears that this vegetable is very prolific, grows lofty, and requires a warm aspect; being serviceable both for the cottager and the farmer. The Council referred the trial of these seeds to the Horticultural Society and Messrs. Thomas Gibbs and Co., with a request that they would respectively report to the Council the result of their cultivation.

**Russian Turnip.**—Mr. Wells, of Botley, Hampshire, presented specimens of plants grown from Russian (Swedish) Turnip-seed imported last year, and sown on the 22nd June. The Turnips were hoed on the 25th July, formed miniature bulbs early, and soon completed their growth. Mr. Wells considered that on these accounts, this new variety of Swedish Turnip would be found well adapted for late sowing. The seed-plants presented by Mr. Wells stood about five feet high.

**Guernseyism.**—The Rev Daniel Gwilt, of Icklingham Rectory, near Mildenhall, Suffolk, reported to the Council the success with which he had adopted the plan of cultivation recommended by Mr. Guernsey; and he ventured from practical experience to recommend the system most strongly, his success under it having exceeded his expectations. He thought it might be carried out with great advantage to a certain extent upon most farms in any district; but more especially in the sandy districts of Norfolk and Suffolk, where heather, broom, larch-trimmings, &c., may be had in such abundance, and at a small expense.

**St. John's Day Rye.**—Mr. Gwilt also informed the Council that for the last three years he had been cultivating a variety of rye very similar to that named St. John's day rye. It was known to him as the giant rye, and seemed, from the experience he had had of its qualities, entirely to answer the description given of its merits in Mr. Pusey's communication to the Council.

**Flax Seed.**—Mr. Taylor, of 314, Regent-street, communicated to the Council analyses made by Dr. Ryan, of the Royal Polytechnic Institution, of common linseed and the seeds of the "gold of pleasure" flax. It appears from these results that linseed gave 82½ per cent. of a peculiar gum, and Gold of Pleasure 83½ per cent. of mucilage, which on further analysis yielded 61½ part of a soluble, and 22 parts of an insoluble gum. The elementary analysis showed the Gold of Pleasure mucilage to contain 7 per cent. more nitrogen than the Linseed-gum,

and 6 per cent. less oxygen. Dr. Ryan considered the amount of nutriment in the seeds of the Gold of Pleasure, the excellent quality of the oil, and the small quantity of inorganic matter they contained, as points greatly in their favour for the production of oil cake of a nutritious character.

**Analysis of Manure.**—Mr. Shaw laid before the Council the analysis made by Messrs. Balmain and Parnell, of the manure manufactured by Messrs. Daniel Hutchinson, and Co., of Camborne, Cornwall; from which it appeared the manure in question consisted chiefly of 45 per cent. silicate of lime, 19 per cent. of carbonate of lime, 28 per cent. of caustic lime, with 2½ per cent. of magnesia and alkaline salts. Messrs. Balmain and Parnell remark:—"The efficiency of the manure is, no doubt owing principally owing to the silicate of lime and alkaline salts.—The lime is useful alone, but the silicate of lime (and more especially that variety it presents in this manure) is valuable as a constant source of lime, and soluble silica, the lime being progressively supplied from a latent course. The silicate of lime gradually yields both its silica and its lime to the action of water; but until the lime is separated from the silica it is not active or caustic, and not all at once presented in a caustic state. The alkaline salts, though so small in quantity, are still important; possibly, in many cases, all the more useful because they are so small in quantity, as an excess of them is more to be dreaded than a dearth."

**Agricultural Education.**—Mr. Warry, of Shapwick, near Glastonbury, Somersetshire, expressed his willingness to place at the entire disposal of the Society (on terms of acknowledgement only of his proprietorship) a school and master's house, with a farm of a great variety of soils attached to them, for any experiment the Council might wish to make in reference to the education of those who depend upon the soil for their support.

Mr. Turnor, of Abbot's Bromley, near Rugeley, Staffordshire, transmitted copies of the Society's Tract (from the Journal) on Cottage Economy and Cookery, and Mr. Blacker's essay on the cultivation of small farms, both translated into the Welsh language, and printed in a cheap form for extensive distribution among the farmers of North Wales. The following directions for butter making had also been translated into Welsh and extensively circulated throughout that part of the principality.

**Preparing Butter for the London Market.**—"The following is the most approved method of making and preparing butter for the London market, and is submitted for the advantages of farmers and dairy-men throughout Ireland. Butter made on this system, with care and quick despatch, will insure high prices and quick returns. The agent's comment on each dairy's butter, and improvement, are still going on. The best lands is old pasture, as free from weeds as possible, with abundance of good water. The cows should not be heated or tormented in any way; housed at night, fed on green food, and the pasture changed when practicable. In milking take salt-petre in the pail, one eighth of an ounce to 8 quarts of milk. The dairy should be perfectly clean, airy, and of equal temperature (say 50°), very little light, and completely shaded from the sun, by trees or otherwise; and in winter a stove may be required. Strain the milk into coolers sweet and dry (neve, six warm and cold milk), keep it from two to four days, then put the whole of the milk and cream into a clean churn, which is not to be used for any purpose except during the time it is in operation. Boiling water to be added to raise the temperature to about 68° or 69°, if horse or water-power be used. The time occupied is from one to two hours, depending on the size of the churn; but churning should not be continued beyond the proper time. After churning put the butter into two bowls or pans of pickle, made from pure water and fine stoved salt (as common gives the butter a bad flavour). It should be washed, and the pickle changed frequently, until all milk is extracted, working with the hand the two pieces alternately, until the grain become quite close and firm; when it is to be cured with the finest dry-stoved salt and sugar. The proportion to be one ounce of refined sugar to one pound of salt, to be

well worked into the butter with the hand; but the quantity of curing materials will depend on the time and labour given by the dairy-woman, in working and beating the butter (after the salt and sugar are applied), which should continue until all the pickle is driven out. The butter should be finished the day it is churned, and then be pressed as closely as possible into the cask. The cask should be well seasoned for some days previous, with strong pickle, frequently changed, or hot pickle; and must be strong and air-tight; the size is of no consequence if filled and sent off in one week. If not filled at one churning, the butter is to be covered with pickle until the next; but no cask to contain more than one week's butter. If butter should at any time, appear pale in colour, after churning has commenced, a little grated carrot-juice may be put into the milk, and will not injure either the milk or butter. All butter should be at the place of shipping one day prior to the steamer leaving, so as to run no risk of going forward to the agents."

*To the Editor of the Mark-Lane Express.*

Sir,—Perhaps it may not be uninteresting for the readers of your journal, in which there is so much information of all descriptions in agriculture, to give a few particulars of the prices which some of the ewes of the Dishley or Blakewell's breed fetched belonging to Mr. Paget, when sold by public auction, on the 16th Nov., 1793.

Lot.	Ewes.	Gs. each.	Amount.	Bought by
2	5	20	100	Mr. Stubbings.
3	5	22	110	Mr. S. Stone.
4	5	20	100	Mr. Tomalin.
5	5	30	150	Mr. Breedon.
6	5	62	310	Mr. Buckley.
7	5	29	145	Mr. Bennet.
9	5	22	110	Mr. Boyer.
10	5	25	125	Mr. Bennett.
12	5	16	80	Mr. Powrise.
14	5	20	100	Mr. Freyer.
15	5	20	100	Mr. Deverell.
16	5	18	90	Mr. Wingfield.
17	5	30	150	Mr. S. Stone.
18	5	20	100	Mr. Martin.
20	5	20	100	Lord Egremont.
23	5	16	80	Lord Egremont.
37	5	45	225	Mr. Pilkington.
38	5	52	260	Mr. Pilkington.
39	5	16	80	Lord Harborough.
40	5	17	85	Mr. Meland.

Independently of the lots I have just quoted, 30 ewes were purchased by private contract at 20 guineas each, by Mr. Simpson, before the sale.

It appears, at the time of this sale, fat made as much as lean. Now in London one pound of lean meat is worth more than two pounds of fat when pared off as tallow. It was the grand maxim of the Leicester breeders then, that the bones of an animal intended for food could not be too small, and the fat was considered by the pure Leicester breeders then to be the most valuable part of the carcase, therefore they considered it would not be too abundant for they wanted to cover their animals externally with masses of fat. Therefore the entirely new Leicester breed of sheep, from their excessive propensity to fatten, produce too small quantity of eatable meat, and a deal of it of a very inferior flavour and quality compared with the Downs. This great mass of fat the Leicester sheep are covered with is now sold at an inferior price to make candles instead of food for man; for their carcase produce little else but fat. The aristocracy have found out the very great waste must ever attend in the consumption of over-fattened cattle, as in noblemen's and gentlemen's houses, the fat that does not go into the dripping pan goes to the dust-heap or into the swill-tub, to be consumed by swine. What a contrast between the porpoise-fat-Leicesters and Mr. Daniel Maydwell's (of Leatherhead) extraordinary thick-in-the-lean and fine-flavoured Downs, slaughtered and exhibited at the

Christmas Show by Mr. Banister of 'Threadneedle-street, purveyor to her Majesty! At the Christmas Show twelvemonths last Christmas, Mr. B. had 30 hung up in his shop, second to none, of any sort or kind: they were bred and fed by Mr. Maydwell. Last Christmas he had 28 exhibited, bred and fed by the same person: all persons who saw them said they could not be excelled.

By inserting the above, you will oblige

A NORTHAMPTONSHIRE GRAZIER.  
Barby, near Rugby, Warwickshire.

**LIME AND SALT.**

We think the following quotation contains answers to the queries of a correspondent, "A Subscriber":—Mr. Bennett tells me, in an obliging communication, dated December, 1838:—"My wheat crop of this season has quite convinced me of the value of the mixture of salt and lime. I had it used on twenty-eight acres of wheat, in two situations; eighteen acres of high and dry land, and ten acres of low but well-drained land, both clover ley; twenty bushels of salt, and forty bushels of lime, per acre, were sown a week before the seed, by shovels from the tail of a low cart. It was mixed dry, and continued so in a heap for nearly three months, and was turned over four or five times. The land, though in good condition, had no other manure, except one course of sheep-fold. The wheat was the strongest and largest in the straw of any I have ever seen. My turnips with salt and lime are quite as good as those with yard dung: I top-dressed a field of wheat, about fifteen acres, in the spring, the ridges being two perches wide; commencing, first ridge, 20 bushels of coal; second ridge, salt and lime; third ridge, 20 bushels of soot; and continued this throughout the field. The result was, that the salt and lime produced the largest grain by 1.30th, the heaviest grain taking similar quantities by 1.25th, and the brightest colour. The coal ashes were the second best, the soot the third, though not much difference between the two latter."—*Cuthbert Johnson's Fertilizer, p. 449.*

**FOR PREVENTING THE RAVAGES OF THE TURNIP FLY.**

Mr. Hillyard, in the 4th edition of his "Practical Farming and Grazing," states, "that after numberless trials to prevent the ravages of the turnip-fly the only way which I found at all successful is, to collect all the weeds I can on the farm, and lay them in heaps all round the field sown with turnips; on the plants coming up, and showing the least appearance of being attacked by the fly, the heaps to windward are set on fire, brimstone is put in the fire, and thus the strong sulphurous smoke, which is offensive to the insect is wafted over the crop. If this is continued till the turnips get into rough leaf, they will be safe; but if before this the process is stopped for 5 or 6 hours together, in a fly-working day, the crop will most likely be lost; therefore, I have not scrupled on a Sunday to have the fires lighted before the morning, and also before the afternoon service. By annually adhering to this practice I did not fail for fifteen years, having a good crop of Swedes, without ever having, during that time, the necessity of a second sowing. When, some years ago, I mentioned my smoking fly-preventive scheme, after dinner, at our Society's annual Meeting, I got a little smoked myself; but having had in 1835 a full crop of Swedes, which was a very rare sight, I had the satisfaction in 1836 to see my plan adopted on the farm of the noble patron of our Society, and many other farms in the country."

**NOTICE TO FARMERS REGARDING FODDER.**

Mr. Stephens of Sheephouse, near Hay, the celebrated cattle breeder, lost his valuable bull "Prince" a few days since. His death is attributed to eating vetches. Mr S. bought the above bull at a sale of Mr. Morris' at Stockton near Leominster, for £65. He was allowed to be a very fine animal, and his fellow difficult to be found.

## The Canadian Agricultural Journal.

MONTREAL, JULY 1, 1845.

Now is the time for the friends of the law of the last Session of our Provincial Legislature, for the encouragement of Agriculture, to support this law, and give it all possible chance of being useful to the country. As we before observed, all depends upon the manner in which the County Agricultural Societies will manage and apply the funds committed to their disposal. If they honestly intend to promote agricultural improvement where it is most required, and give instruction and encouragement to farmers, who are not sufficiently acquainted with the art of agriculture, the law will work well and beneficially; but if they will not act thus, and allow the funds of the Societies to be paid away in premiums to farmers who already know their business, and happen to be more fortunate than others in the possession of capital and other advantages, then the late law will prove as useless and unproductive of improvement as all former laws have been, and from the same cause. We have no interest to serve in giving this opinion, but it is one we have formed from giving much consideration to the subject. It was from knowing how difficult it is to find in Canada sixteen *skillful* farmers in each county, who will heartily devote themselves to promote the improvement of agriculture, free from all motives of self-interest, and give the full advantage of their superior skill to instruct those who require instruction, foregoing all advantage themselves. Because we know this cannot be expected, we urged upon the government the necessity which existed of instituting a Board of Agriculture, that would have the controul of all the monies granted for the encouragement of agricultural improvement—that would direct the manner of its distribution, and adopt general laws and regulations for all the local Societies, or receive their reports, and publish an annual journal of agriculture, and of their transactions, for distribution. If the general improvement of agriculture is desirable, and the public money granted to effect this improvement, we conceive this money should be applied to produce the improvement where it is required, and not where it is not required. We have no hesitation in

saying that the public money would be better applied to effect this purpose, under the controul and direction of a competent Board of Agriculture, than it is ever likely to be by any other plan. This would not take the power of all action out of the hands of county and local Societies; they, on the contrary, might be as useful as they were disposed to be. It would only exercise a wholesome controul and direction, and compel the application of the public money to the most useful purpose, and to effect the object for which alone the money was granted by the Legislature.

## AGRICULTURAL REPORT.

Since our last report, we have had several falls of rain, which produced a most beneficial effect upon the growing crops, and their appearance is now very promising, with the exception of the meadows, which are too far advanced towards maturity to improve much. They have also another drawback, from the large patches in almost every meadow that has the grass winter killed upon them. There has been severe injury done to the meadows in this way last winter and spring than for many years previously. From all these causes, we believe hay will be a very short crop this year. This season throughout, we have had high winds constantly, and we expected that this might have destroyed the wheat fly, as they cannot do any injury to crops when the wind is high. The evening of the 7th July, was the first calm interval we noticed from the period of the fly's first appearance, and we accordingly examined our barley and wheat fields to see if they were to be found. In the barley, which is coming into ear, they were very numerous indeed, and we found them also in the wheat, but fortunately it is not in ear, and therefore cannot be injured by them. The wheat is generally in a backward state, and we hope it may consequently escape the fly, but we believe that no change of weather will destroy them, and that the only check we have in our power is to starve them out, by sowing wheat at such periods, that it will not be in ear when they first appear, or having a variety of wheat that will be proof against their ravages—which may be had. The grain crops have a healthy appearance though more backward than usual. We have observed a large quantity of weeds



throughout the country as usual, and not much attention given to remove them from the crops. We would earnestly urge upon the Agricultural Societies, the expediency of withholding in every case, premiums from farmers who allow weeds to go to maturity upon any part of their farms, in crops, pasture, or waste ground. It is a public injury to allow weeds to mature their seed and scatter them far and wide over the country, and should be checked by every possible means. The agricultural societies may do this, and should prosecute persons, who do not cut and destroy the weeds upon their farms. This would produce a greater general improvement in agriculture, than any other means that can be adopted. The weeds in Canada certainly take from the soil, a large proportion of the nutriment that should be applied to produce useful plants. No doubt, all that is produced by the soil return to it again in some shape or other—so would useful plants, by producing them in place of weeds, after having supplied food to man and his cattle, and weeds are no use to either. The proportion of nutriment drawn from the soil by weeds is much larger than most persons imagine, and we believe is fully equal to a third. This is discreditable to us—and injurious to the whole system of our agriculture. The pastures were generally very short up to the beginning of this month, but the late rains have improved them. The dairy produce is sufficiently abundant to keep the prices in the market moderate. The prices of butchers meat is rather high, but not out of proportion to the cost of producing it. The potatoes we should have observed, have failed in many places to a considerable extent by dry-rot in the seed, the potatoes in most instances may appear over ground, but have a sickly and dwindled appearance, that is a sure indication of the premature decay of the seed planted. This evil it is always in the power of the farmer to prevent, by planting whole seed, it may not however, be in his power to prevent the rot in the tubers, when the crop is near maturity, as happened last year. The only remedy in the latter case is, the application of some sort of substance to the soil that will make it less liable to produce this disease—and also applying the manure required in some other than the usual way. Upon the whole, the farmer's prospects have nothing discouraging in them at the present moment, and if the season finishes favourably,

the crops are likely to be good, particularly the grain crops.

Cote St. Paul, July 8, 1845.

There appears to be in the British Isles a great deficiency of practical knowledge of Canada, so far as regards her agriculture. We have seen persons come here from the mother country who have expected to meet employment as land stewards, or superintendants of large farming establishments, at a liberal salary; and we believe that in the whole extent of Canada they could not find a situation such as they anticipated, and expected to meet, without difficulty. We have frequently been ashamed of our country, when persons such as we have described have come to us for information, and we were obliged to tell them there were no such situations to be had in Canada. They naturally supposed that where land was abundant and cheap, there would be large farming establishments, that would give ample employment, to a land steward, such as may be found on almost every respectable farming establishment in the British Isles. This circumstance clearly proves, however, that agriculture has no particular attraction for capitalists, to induce them to embark their money in that business. The vast majority of emigrants coming here with capital, will rather employ it in mercantile business, than in creating a new produce. They prefer employing capital to gather or accumulate more to it, of what is already made, than to apply it to the improvement of the soil, and raising a new produce that would augment the capital of the country. Hence it is that there is so great a deficiency of capital employed in farming. It is only those who have scarcely any, who think of becoming farmers as a last resource. There may be some exceptions to this general rule, but they are few and far between; and the exceptions, we believe, were generally men who have not been practical agriculturists, but have adopted that occupation in Canada, in preference to going into trade, with which they may have been equally unacquainted, and might be exposed to greater loss.

It is said that finely pulverised Rock or Turk's Island Salt, is the best for preserving butter, one ounce of which is sufficient for a pound of butter. The common Liverpool Salt is said to

contain some matter, or possess some quality, which ought not to be incorporated with butter, and also that this salt is wanting in some important preserving principle, which of course must have been expelled from it in the process of manufacture. We have in a former number of this journal, given a full detail of the dairy management, so far as milking the cows, making butter, utensils necessary, &c. In a future number we shall describe the most approved methods of making cheese. Much of the success of the dairy will depend upon the sort of cows kept, the pasture in summer, and kept in winter. Care should be taken that cows have salt regularly, mixing some salt-petre with it once a month. This we have proved to have a good effect in preserving the cows in good health. Pure water in abundance also is essential.

Genius, generally speaking, is only entitled to respect, when it endeavours to promote the peace, and improve the comfort and happiness of mankind. Talents are always accompanied with the responsibility of using them rightly, and if the possessor does not so employ them, it would be better for him he never was so gifted. However splendid talents may attract our admiration, they have no right to claim the general esteem of mankind, when their possessor exercises them without regard to what is due to the well-being of society and himself. Talents, when employed to promote the comfort and happiness of society, are always entitled to respect and gratitude.

In England they top dress wheat with soda, saltpeter, or guano, which acts as a powerful stimulus, and is said to add from four to six bushels to the produce per acre,—100 lbs. of either of these manures are applied to the acre.

The month of May has been complained of in England this year as unusually cold and wet, with high winds, very similar to what we have experienced in Canada. They had rain on 22 days of the month, and the quantity that fell was near four inches and a half, or double the quantity that fell on an average in the month of May for the previous five years. The average temperature was also near six degrees lower than the average for the

same month for the five years previous. It appears notwithstanding, that the growing crops in England have a most promising appearance, and are likely to be most abundant. We have frequently found that the spring and summer weather in Canada, is very similar in its general character to that in England, particularly when there is any deviation from what is usual.

#### PENWITH AGRICULTURAL ASSOCIATION.

At the dinner which took place in Penzance on last Tuesday, where the association held its annual show, the Chairman (Col. Sco. en) said, in alluding to the properties of guano—

It was a very quick fertilizer, but he would recommend the users of it to observe whether it improved the quality of the grain. It was known to throw out an immense quantity of straw, but he had never heard any one say that it improved the corn; and its benefit, as a fertilizer, he understood lasted only about five or six months.

Mr. Silverster said, that he had not made a proper trial of guano upon corn, but he had found it a very valuable manure for grass. Last season he cut down four tons of grass per acre on land dressed with it; and this year without any additional supply, he had more grass than he ever grew before in any one season. He found it to answer well for turnips, and applied it at the rate of three cwt. per acre, but had found five cwt. was much better.

Mr. Tyacke had sown part of a wheat field this season with Peruvian guano, at two cwt. per acre, and found the corn grown upon it to be much superior. It was sown in with the seed, October twelve months. He also manured another portion of the field at four cwt. per acre, and he thought that the quality of the corn from this was better.

Mr. Nicholas Permewan said, that during the last three years he had laid out large sums on guano, and this year to above £18. He applied it to ten acres of wheat at two cwt. per acre, which had been well dressed with farm-yard manure, but had come away badly, and the result was astonishing. He had applied three cwt. to twenty acres of grass, and the effect produced was most beneficial. He had also tried it on part of a turnip field of thirty acres. The field was manured with farm-yard dung and earth from the neighbourhood, at the rate of ninety to one hundred loads per acre, but a space of seven acres in the center was manured with guano at two cwt. per acre. On the latter the turnips were equally as good as on the former. After the turnips he put in wheat, and no man could say which manure had given the better crop.

Mr. Pascoe tried bone dust and guano separately on turnips last year. At first the guano lot did not come on so quickly as the bone dust lot, owing to the drought; but after a fall of rain it pushed on vigorously, and turned out the best crop. He also put twelve hundred of guano to three acres of grass, but he might as well have tossed his money into the sea. It proved the worst grass field he had ever seen; but the dry season it was said, was altogether unfavorable to it. In September he applied four hundred of guano per acre to three acres of yellow turnips; and after the first month the bulbs grew rapidly, and he never saw a heavier crop (cheers.)

Mr. Tyacke said, last year he had ten or fifteen acres of wheat on land not worth 5s an acre, but manured with guano; and this year he had wheat on equally poor land; and he had found the poorer the soil, the better it would answer. He sowed the guano along with the seed, and then harrowed it in. Last year he sowed one-third of a field of eight acres with bone dust, the middle with guano and the remainder with farm-yard dung, in the proportions of two and a half qrs. bone dust, two cwt. guano, and

forty loads farm-yard dung. The bone-dust gave a fair crop, the guano a third larger, and the dung gave the worst of all. This year the field was in barley, which seemed the best at first on the part manured with dung; then the bone dust portion looked best, but now that on the guano was better than either. At first he had from twelve to fifteen bushels from the poor land alluded to.

Such testimony from practical men is conclusive, if further evidence were needed, of the permanent benefit of guano. The Peruvian or Bolivian should be used.

RELATIVE VALUE OF VEGETABLES AS FOOD,

As a matter of practical utility to every farmer who keeps animals, we give from Boussingault the following table; exhibiting the relative value of different kinds of vegetable foods, calculated on the amount of nitrogen they contain; or, in other words, on the quantity of vegetable fibrine, albumen, and caseine they will furnish to the circulation:

	Am't per ct. of nitrogen.
Hay from red clover in flower	1.76
Hay of vetches	1.41
Lucerne hay	1.35
Common hay	1.04
Green clover	50
Potatoes	37
Green lucerne	30
Carrots	30
Wheat straw	20
Barley straw	20
Oat straw	19
Rye straw	17
Turnips	17
Beans	5.11
Vetches	4.37
Kidney beans	4.08
Lentils	4.00
Yellow peas	3.40
Wheat flour	2.27
Wheat grain	2.13
Rye	2.04
Oats	1.96
Barley flour	1.90
Barley grain	1.76

  

Value compared with Hay as 100	
Hay from red clover in flower	60
Hay of vetches	74
Lucerne hay	75
Common hay	100
Green clover	208
Potatoes	281
Green lucerne	349
Carrots	347
Wheat straw	520
Barley straw	520
Oat straw	574
Rye straw	611
Turnips	612
Beans	20
Vetches	24
Kidney beans	25
Lentils	26
Yellow peas	31
Wheat flour	46
Wheat grain	49
Rye	51
Oats	54
Barley flour	55
Barley grain	59

In this table Boussingault has taken good common hay at 100 as the standard. Thus, 60 pounds of good hay from red clover in flower, is equal in nutriment to 100 pounds of common hay, 281 of potatoes, or 520 of wheat or barley straw. The leguminous plants—such as the beans, vetches, lentils, and peas—afford the most nitrogen, and every farmer knows they rank deservedly high

in the scale of nutrition; still, as they are destitute, or nearly so, of the phosphates required for the formation of bone, experience proves they are the most useful, when fed in connexion with some of the cerealia or grains. We believe that most farmers will find that their experience in feeding animals agrees very well with the estimates of the table. Thus, in soiling, 208 pounds of green clover, or 347 of green lucerne, will be found equal to 100 pounds of hay—a result which few will doubt who have made experiments in this mode of feeding. Forty-six pounds of wheat flour are equal in nutriment to 281 of potatoes; but the animal would fare better on the potatoes than on the flour, as there would be more bulk for the proper distention of the stomach.—*Alb. Cult.*

CULTIVATION OF CELERY.

From Mr. Ellsworth's Report for 1844.

DEAR SIR,—The cultivation and growth of celery, that most excellent and wholesome winter vegetable, require the close attention of the gardener to bring it to perfection.

A practical gardener will soon learn the art; and for the benefit of those who have yet to learn it, I beg to hand you the result of my own experience for the last twenty-five years.

In this country it is not necessary to sow the seed before the month of May, and then in the open ground, well manured with stable dung thoroughly cured, and not less than a year old. The colour, whether white or red, is a matter of taste. I generally mix my seed, and thus have both species. The seed is slow of vegetation, but, if good, never fails to germinate. Whether it be sown broadcast or in drills, is a matter of no consequence; as the seed being very small, the plants are sure to shoot up thick. So soon as the sprouts have attained the height of an inch, they should be pricked out in a bed of rich mould, at the distance of about three inches each way from each other. You cannot have good strong stocky plants without pursuing this method. If left standing in the seedling-bed, they will grow spindling, weak, and consumptive. No more attention is required, excepting that of keeping the plants perfectly free from weeds until August, when you will find the plants strong, healthy and vigorous.

Any time in this month dig your trenches eighteen inches deep, and as many wide. For this purpose I generally occupy the ground that has been used for early peas.

The quality of the celery, and chiefly its growth, depends entirely upon the next step. The trenches should be half filled with thoroughly cured stable manure. I have found the manure used for early hot-beds the best. It never fails of success. The increased fermentation of the manure, by the repeated waterings of the beds, the escape of the ammonia and noxious qualities of the manure render it sweet and capable of imparting the mildest and richest flavor to the plant. If fresh manure from the yard, of whatever kind, is used the celery will invariably grow strong and rank, with as little delicacy of flavour as there is in manure. With a garden fork of four tines, strike through the manure in the trench into the earth beneath and bring it up fresh, carefully mixing it with the manure as you proceed from one end of the trench to the other. Attention to this point is indispensable to the growth of good celery.

The plants taken up should be trimmed about the crown, just at the top of the root; all the young suckers taken off, leaving the plant trim and neat, with all its main stalks. With a dibble, which should be as large as the handle of a spade, as the roots will now be of considerable size, begin at one end of the trench with your face towards the other, and set in a single row of plants in the middle of the trench, and not less than six inches asunder; water them well. No tectotaler loves water better than does celery. It cannot have too much. The roots of this plant require more rosin than is generally allowed them, as any one may see when they are taken up for the table.

Earthing up the plants should be delayed until they have attained a good size; and then it requires care, especially the first time. I always get into the trench myself, and, holding the plant with all its stalks firmly in my left hand, with a short-handled small hoe draw the earth up round the plant, without allowing it to come in between the stalks. When this is done, and the plants thus protected, you may, with a spade, strike off the edges of the trench, and partially fill it. As the plant grows, as it now will, if well watered in dry weather, with great vigor—continue to earth up, and by the 1st of November the plants will be two feet above the level of the earth, with a main stalk the size of a man's arm.

Sometimes, particularly if the season be dry, celery is liable to be attacked by a fly. In that case you will see the tops of the celery turn brown and wither. The moment that symptom appears, no time is to be lost in calling in the doctor; for the whole crop is at stake. The cause of the disease is the sting of a fly upon the leaves of the celery. The egg is deposited between the integuments of the leaf, and soon hatches into a small white worm—sometimes visible on opening the leaf to the naked eye, always by the aid of a microscope. If not attended to, the disease gradually descends to the root, and the whole plant falls a sacrifice. Amputate every defective and diseased leaf; and early in the morning, whilst dew is on, sift on to the whole of the plants fresh slacked lime. One such powdering is generally sufficient; but if not, give them another dose, and the first rain that falls will wash the plants clean, and you will probably see them fresh, green, and stretching away towards maturity.

With regard to the mode of securing the crop for winter use, gentlemen have their fancies. I prefer leaving the plants in their original trenches, earthing up to top of the plants, and covering with straw litter and boards, so as to protect them sufficiently from the frost; to be able to take them up as wanted; and this always fresh and sweet. I do not fancy disturbing the roots, and transplanting into narrow quarters.

Finally, any one in this country who wishes to have "first-rate" celery must cultivate it himself. Common laborers are sure to spoil it. Professional gardeners are seldom found, and generally too expensive when they are.

Your obedient servant,  
JUNIOR SMITH.

New York, Dec. 12, 1844.

### SOILING, OR HOUSE-FEEDING CATTLE.

At a late meeting of the Farmer's Clubs in Scotland, Mr. Harkness read a communication from Mr. Skilling, of Glasnevin, from which we make the following extracts:

"How does it happen that the Belgians have kept up in the highest condition an indifferent soil, without any such extraneous manures as bones or guano, or any other importation of any kind? This they have done for hundreds of years, and yet their land is never poor or exhausted, but in the highest state of production. The reason is obvious. There is no witchery in their management; and if the farmers of Scotland would only follow their example they would find themselves fully recompensed for their pains. If they would deepen their lands, keep more stock, and chiefly housefeed them, saving the manure—liquid and solid—raise an abundance of crop for soiling summer and winter food, they would make more from their cattle and their land.

When I first adopted the house-feeding system, my neighbours laughed at me, and predicted that my cattle would die; others said the cows would give no milk; but their predictions were not verified. My cows had a good appearance, and when driven to water twice a day, [not enough—cows need drink four times a day, at least]—they were wild and full of spirit; and when others were dry, mine were giving milk.

I have estimated correctly that a well fed cow in the house will make 25 tons of liquid manure, which will be

sufficient for an acre of ground. I can, on an average, keep a cow on two British acres. The cows also give much more milk.

When my present farm was in pasture, only 18 cows could be kept in summer. Now, by the soiling system, it feeds from 20 to 22 cows, 3 horses, and from 30 to 40 pigs, all the year round; and I have as large a proportion of grain crops as most other people have on farms of equal extent—(52 acres.)

No doubt, the system, if ill-wrought, will fail. Some who try it, will bring their cows into the house; they are tied up, and perhaps injudiciously confined—kept filthy—not regularly curried—a large quantity of some particular kind of food is put before them, and this repeated, cloyes the appetite, and the animals refuse their food.—They are, perhaps, neglected in water—by-and-by they fail in milk—get out of condition—and the whole experiment is a failure, from being wrongly conducted. The house itself must be airy, well ventilated, and kept perfectly clean. The animals must be well curried and brushed at least twice a day. There ought to be one particular person to superintend and pay attention to the feeding; and one of the first and most important parts of his duty is, to ascertain the appetite of the beast. Cows, like other animals, will eat less or more; and they ought to be supplied accordingly as they require it, being kept rather with an appetite than otherwise. As soon as the animal has eaten its food, all refuse should immediately be taken away, and nothing suffered to remain in the stall before it. Should it seem delicate and careless in eating, let the food be at once removed. The times of feeding are also of great importance, and ought to be regulated. The cattle will know the hour of feeding as correctly as the clock can tell it, and will be disappointed and fretted if neglected. This neglect is prejudicial to milking and fattening. I give six feeds in the day, summer and winter—beginning at 6 o'clock in the morning, and ending at 9 in the evening—viz: at 6, at 8, at 12, at 3, at 6, and at 9. They get water in their stalls at 10 in the morning, and at 5 in the afternoon. They are likewise turned out one hour from 10 to 11, where they exercise and drink if they choose.

The kinds of food I use are chiefly the following: in summer, at 6, fed with perennial or Italian rye-grass and clover; at 8, with cabbages or leaves; at 12, with cut hay and straw, mixed—(this feed is to prevent the action of too much green food on them)—at 3, upon vetches; at 6, upon mangold wurzel leaves or refuse of the farm or garden; at 9, upon clover or grass; or this may be a dry feed, if the state of the bowels require it.

In winter, at 6, feed with steamed food; at 8, with turnips, raw; at 12, cut hay and straw; at 3, with mangold wurzel, raw; at 6 with steamed food; at 9, with hay and straw. Water must be given or offered, and plenty of salt used in the steamed food."

With respect to ventilation of cattle houses, Mr. M'Culloch stated that he considered too little attention had been paid to this important matter, as nothing tended more to promote the health of animals more than well ventilated houses. There should be a small aperture below and above in the wall, behind each animal, so that by the admission of air beneath, the respired vitiated air (carbonic acid gas,) which is very injurious to animal life, together with the pernicious effluvia from the skin, urine, and dung, may be forced out by the upper aperture, and in this way have a constant renewal of air.

Mr. M'C. was astonished to observe that even in the establishments of many of our most eminent agriculturists this important subject was so much overlooked. You will often observe openings in the upper part of the hovel, or in the roof, for the escape of the contaminated air, but it seems to be forgotten that there should be an admission of fresh air below, to cause the effective expulsion of the contaminated atmosphere.—*London Agricultural Gazette*.

**Strawberries.**—Take the strongest of the runners of strawberries off in June, if you want to make new plantations.

## RECOVERING PASTURES.

I will append one suggestion as to recovering pastures, which I have found *very useful*, and may be done without manure. This is, to turn them over the last of July, or as soon after as business will permit, and sow two bushels of rye to the acre, and bush in the grass seed.—Row one bushel of plaster to the acre after the rye is up, and when it is well grown, I turn on the sheep. In the spring I dress it again with plaster, and give it one bushel of red-top, to an acre, and keep sheep enough on it to keep it from rising, till the last of May, then cattle may be put on, if desired. It will last through the summer, and produce abundantly till the grass is well rooted.—Pastures thus treated will look surprisingly verdant, and will last several years. Nothing suits sheep and calves better than rye. The same course may be pursued with exhausted or bushy pastures. I prefer to keep sheep the first year, as they keep every spire of it close, and thus make it spread, and they manure it more equally than cattle, and don't injure the grass in its tender state.—*Boston Cult.*

SIMPLE AND CHEAP AMUSEMENTS  
IN GERMANY.

What now, amongst the Germans, strikes every liberal lover of his country, every man who has no motive but to see the truth and spread it, especially in our own beloved country. He sees a simple and less feverish state of existence. He sees a greater portion of popular content diffused by a more equal distribution of property. He sees a less convulsive straining after the accumulation of enormous fortunes. He sees a less incessant devotion to the mere business of money-making, and consequently a less intense selfishness of spirit, a more genial and serene enjoyment of life, a more intellectual embellishment of it with music and domestic entertainment. He sees the means of existence kept by the absence of ruinous taxation, of an enormous debt reckless and lavishly piled on the public shoulders, by the absence of restrictions on the importation of articles of food, cheap and easy of acquisition. He sees, wherever he goes, in great cities or small towns, every thing done for the public enjoyment. Public walks, beautifully planted, and carefully accommodated with seats at convenient distances, for the public to rest at leisure. He sees these walks laid out wherever it is possible. Old town-walls and ramparts are converted into promenades, commanding, by their elevation, the finest prospects over town and country. The whole of city or town is encircled by them. Thus the old as well as the young can ascend from the heat and dust, and hurry of the streets, and enjoy the freshest air, and the most lively and yet soothing scenes in the streets below on one hand, or gaze into the green fields and hills around. It is delightful to see, on fine days, the grey-headed fathers of a city thus seated on these airy walks, beneath their favorite limes, and enjoying their chat together over old times; while, within a few steps of home, their eyes can still wander over those distant scenes whither their feet no longer can carry them. If there be an old castle in the suburbs of any of their towns it is not shut up; but its gardens, and its very walls, and courts, and fosses, are laid out in lovely walks, and the whole place is made the favorite resort and enjoyment of the whole population. There a coffee-house or casino is sure to be found; and there, beneath the summer trees, old and young, rich and poor, sit and partake of their coffee, wine, and other refreshments; while some old tower near is converted into an orchestra, and sends down the finest music for the general delight. He sees all sorts of gardens, even to the royal ones, and all sorts of estates, kept open for the public observation and passage through them; he sees the woods and forests all open to the foot and spirit of the delighted lover of nature and of solitude. He sees all public amusements and enjoyments, as theatrical and musical representations, the very highest of this kind, kept cheap and accessible to all. There are no operas there, with boxes

let at £300 per annum; with seats in the pit at half-a-guinea each. Twenty-pence is the price of gentility itself; and for fivepence may be heard, and in a good place, the finest operas performed, by the finest singers in the country. For fivepence may be attended the finest out-of-door concerts of Strauss or Lanner in the capital of Austria itself. He sees education kept equally cheap in school and university, kept within the reach of all, for the free use of all; and the school so systematized, as to answer the various requirements of every varied class or profession. He sees the church kept cheap, and the church open and free to one man as well as another, without pews and property, where all should be open, the common meeting-place of the common family, before the common Father. He sees musical and singing societies encouraged amongst the people, where the working classes, when the labours of the day are done, can meet and enjoy a refining treat. He sees these civilizing and refining influences extended over the open-air enjoyments of the Sundays and holidays of the common people in city and country.—*German experiences, by William Howitt.*

PRESENT FROM THE EMPEROR OF RUSSIA  
TO PRINCE ALBERT.

His Imperial Majesty the Emperor of Russia has just forwarded to this country, for presentation to the Prince Consort, a most magnificent gift, consisting of three Russian carriages and four superb horses of the purest Oiloff breed. The valuable consignment reached this country on Thursday, arriving at Blackwall in the Camilla steamer, from St. Petersburg direct. The carriages—a double droshky, a single droshky, and a sledge—are respectively built in the most finished style, and fitted up with every regard for the convenience of the Royal passengers for whose use they are intended. The first two equipages are of a very peculiar and elegant construction, exclusively national, and affording a striking contrast to our English vehicles. Each of the carriages is intended to be drawn by one horse, which is attached in the Russian style, having the picturesque *Dovga* rising over the animal's head from the extremity of either shaft. The double droshky, which contains seats for two persons behind the driver, is of a brilliant sky-blue colour, edged with gold, the cushions being of a corresponding hue, with silver facings. The imperial crown is mounted in gold on either pannel. The colour of this carriage is understood to be in accordance with the taste of the Empress. The single droshky is of a darker colour, and affords accommodation for one person only behind the driver. The sledge is very beautifully constructed, and has a most novel appearance. It is entirely of hazel wood, the apron being formed of a magnificent bear-skin. The horses are selected from the Emperor's private stud. Their symmetrical form and great beauty are remarkable. One of the animals (an entire horse) is one of the deepest black, with a long flowing tail, and stands nearly 16 hands high; two others are grey geldings, almost equally beautiful; and the fourth is a black horse, with a tail extending to within an inch of the ground. It is, perhaps, not generally known that the Russian mode of driving differs very materially from our own. The coachman sits on a small dickey in front of the carriage, and holds a single rein in each hand; the snaffle-bit, which alone is used, being thus pressed against the horse's jaws. It is obvious that an English servant would feel himself a little at fault in adopting this novel mode of Jibuship, and the Emperor has accordingly sent over three of his own servants to instruct the Royal coachmen in their new duty. The whole of the carriages and horses were shortly after their arrival removed from Blackwall to the Russian Embassy, where they will remain up to 8 o'clock this morning, at which hour they leave for Buckingham Palace. The horses were attached to the different carriages on Saturday afternoon, and driven two or three times round Berkeley-square, for the purpose of ascertaining that everything was in a perfect state preparatory to their removal to their destination. It should be mentioned that the har-

nees and trappings are of the most costly and superb description.

### THE WELL OF ST KEYNE.

This well, situate about three miles from the town of Liskeard, and within a short distance of the parish church of St. Keyne, is the most celebrated spring in Cornwall. The only thing at all striking in the locality is the five large trees (two oak, two ash, and one elm,) growing as if from one root, immediately above the well. The chief attraction of the well lies in the supposed magic quality of its water; and this has always made it a place of great resort to all lovers of the marvellous, who flock to drink the pure and limpid stream, hoping thereby to obtain that power it is supposed capable of conferring. It has often been made the subject of verse; and the late Poet Laureate wrote a humorous tale, founded on its imaginary virtues. As some lines explain the good qualities of the water, they are here given for the information of any reader who, having entered the holy state of matrimony, may journey that way, and feel desirous of quaffing a bumper to the memory of St. Keyne and his own success.

If the husband of this gifted well  
Should drink before his wife,  
A happy man thenceforth is he,  
For he shall be master for life.

But if the wife should drink of it first,  
God help the husband then.

The Rev. Mr. Whittaker says, that "not one husband in Cornwall has been known for a century past to take advantage of the quality, and to secure his sovereignty for ever; the advantage is generously resigned up to our wives, and the daughters of St. Keyne reign in every family." The locality is much resorted to at this season by holiday parties: and a few days since, there was held here a "tea-drink" of the children of the Sunday School of the parish.—*Illustrated News.*

### THE RATA.

This is a curious but very common plant, which is at first a parasite, winding round large trees of the forest till it encircles and destroys them, when its numerous coils join together in one hollow trunk, leaving their victim to rot inside. The rata thus full grown is certainly the monarch of the New Zealand forest. In the gnarled form and tough contortions of its limbs, it much resembles the oak, and is therefore much valued by ship-builders for knees and timbers. The foliage has also the noble appearance at a distance of the English forest-king. But the plant is of the myrtle kind, and bears a bright crimson blossom in such abundance that, at its time of flowering the forests look as though some playful giant had dipped every other tree in crimson dye and stuck them up again.—*Wakefield's Adventures in New Zealand.*

**MANURE.**—It is really surprising to see what a large quantity may be collected and made from a very small number of cattle. If a barn yard were cleared once a week, and transferred to the compost heap, which should be made a save-all of every thing that ever had vegetable or animal life, a large heap is soon made with mud, sod from the sides of the roads, and the deposit of ditches, which may be thrown over, and moved after rains before the land is put to work. The great process of nature is to reproduce, and we may have this reproduction in grain, fruit or vegetables. All we have to do is to prepare the earth, sow or plant, and cultivate and a bountiful Providence does the rest.—*Farmer's Monthly Visitor.*

**To Improve bad Yeast.**—Add a little flour and sugar, and let them work together for a short time.

### TO SWEETEN RANCID BUTTER.

The *Echo du Monde Savant* says—"An agriculturist in the neighbourhood of Brussels, having succeeded in removing the bad smell and taste of some butter, by beating or mixing it with chloride of lime, he was encouraged by this happy result, to continue his experiments, and he has restored to butter, whose odour and taste were insupportable, all the sweetness of fresh. This operation is extremely simple and practicable by all. It consists in beating the butter in a sufficient quantity of water, in which put 25 or 30 drops of chloride of lime to two pounds of butter. After having mixed it till all its parts are in contact with the water, it may be left in it for an hour or two, afterwards withdrawn, and worked anew in fresh water. The chloride of lime having nothing injurious in it, can with safety be augmented; but after having verified the experiment, it was found that 25 or 30 drops to two pounds of butter were sufficient."

### THE MERRY MONARCH. WINNER OF THE DERBY, 1845.

The Merry Monarch is a bright bay horse, 16 hands high, with good lean head, very light neck, high in his withers, (unusually so for a young horse); large ribs, deep brisket, oblique shoulders, good arms, and flat legs; turns his toes a little out; good open feet; straight back, tail well set on, long quarters, large thighs and gaskins, and clean hocks, which in walking he rather twists outwards, always giving an untoward appearance. Mr. Herring thinks another year, if he keeps well, will make him one of the finest horses in the kingdom, and in every way creditable to his sire. The Merry Monarch, bred by Mr. Gratwicke, was got by Col. Pa's Slave (by Royal Oak, dam by Orville) out of The Margravine (sister to Mr. Gratwicke's Frederick, winner of the Derby in 1839, bred in 1837, by Little John, her dam by Phantom out of sister to Election, by Gohann—chestnut Skim, by Woodpecker—Herod. The Merry Monarch's only appearance previous to the Derby was in the Ham Stakes at Goodwood last year, for which he was not fortunate enough to get a place; the race was won by Refraction winner of the Oaks, Wincarlsea second, and Hersey third. Is engaged in the Gratwicke Stakes at Goodwood, and the Doncaster St. Leger.

### CHIMPANZEE AT THE GARDENS OF THE ZOOLOGICAL SOCIETY REGENT'S PARK.

This fine female Chimpanzee arrived at the Zoological Gardens on the 10th of May; having been purchased by the Society, of Messrs. Coleman, Frokhart, and Co., for £300. She was brought to England in the Nunez (belonging to Foster Smith, and Co.) from Rio Nunez, near Sierra Leone, where she had been kept by Mr. Campbell for more than three years and a half, running at liberty. She has had the fever; and while on board ship it is said she had an inveterate dislike to the black men, with whom she would fight lustily. It is singular that she resists every attempt to correct her, fighting with determination; every other animal, even the Orang, fears its keeper. The first day of the Chimpanzee's arrival at the gardens, she tore out three of the strong iron bars of her cage, which have been since strengthened. A temporary nail was driven about half its length into a piece of wood about 5 inches long and 3½ square; she held the wood between her feet, and doubled the nail backwards and forwards, and broke it short off. When in a passion, she tears her hair, and rolls herself on the ground violently. Her table is supplied from the keepers and she shares in everything and anything he has; she eats her egg with a spoon, takes her grout daily, and, 'tis said, that when on board ship, she mixed the latter herself. She will lock and unlock a door, or drawer, will thread any needle; she cannot be taken in by the same trick twice, and will imitate almost anything that is done before her. She is considered by professor Owen to be about nine years old,

which well agrees with all accounts of her previous life. She weighs 52lbs.; measures 2 feet 2 inches round the chest, and is 3 feet 2 inches high; or, as she will not stand upright to be measured, probably her height is nearly 3 feet 6 inches.

#### GERMAN WOMEN.

In my way from Spa, I saw a woman thrashing in a barn with a man; she beat her time well, and laid it on as hard as her partner. This, I think, nearly makes up the list of female accomplishments. Brickmaking, stone-breaking, wheat-sowing, reaping, mowing, thrashing, and carrying heavy loads, are pretty little additions to the burdens that nature lays upon the sex. I have not yet seen any female postilions, or top-sawyers, but I live in hopes. In the evening band at the Brunnen, at Aix, a woman plays the violoncello.—*Journal of a Patient under the Hot Water Cure.*

#### PENNY POSTAGE.

The usual Post office returns have just been issued; they show results which must be highly gratifying to the friends of penny postage. The total number of letters delivered in the United Kingdom in the year 1844 was 242 millions, which is an increase of nearly 22 millions on the previous year. (The number before the reduction of the rate, it may be necessary to remind our readers, was 75 millions.) But the most remarkable fact is the great increase in the London district, or old twopenny post, the letters of which have more than doubled since the penny rate was established.

**THE WEATHER AND THE CROPS.**—During the week we have had a succession of fine growing days, with genial showers and a summer atmosphere. As a consequence, the progress of vegetation of all kinds has been most rapid, and the accounts relating to all farming matters are very favourable. Any continuance of the present auspicious weather will go far to ensure another prosperous agricultural year; for, notwithstanding some local injury from the wire-worm, the grain crops present a most promising appearance, and indeed all field operations have been most successful. In the gardens, most of the early vegetables are now abundant; new potatoes, grown in the open air, have been taken up of good size, and peas have been more than a week in blossom. The promise of fruit of all kinds, except perhaps pears, is excellent.—*Carlisle Patriot.*

**THE WEATHER AND THE CROPS**—June came in with the promise of a succession of bright and more genial days than had marked the progress of the preceding month, with its chilling north-east winds and gloomy rain-charged clouds. Hitherto the promise has been kept; and although rain has occasionally fallen, we have had some warm sunny days, which have produced the most beneficial effects upon every description of vegetation. Much anxiety has been felt for the safety of the wheat crop, especially after a winter of unusual severity and the prevalence of severe spring frosts. On some of the higher descriptions of soil, the wire-worm has made more extensive ravages than has been the case for many years. Indeed, several fields have been so much injured, and the crop rendered so hopeless, as to require ploughing up. On the strong soils, however, the plants look very well, although the growth is not so forward as is generally the case. The barley and bean lands promise, at present, a good produce. The frequent showers have had a beneficial effect upon the pastures and meadows. With regard to the latter, the bottom grass is rank and luxuriant, fully warranting the hope for a crop far superior to that of last year, which, indeed, was lamentably deficient. What is now to be desired is the prevalence of sunlight days and genial nights.—*Doncaster Gazette.*

**THE CROPS.**—We have had a continuation of splendid summer weather since the commencement of

June, sunshine and occasional thunder showers. Notwithstanding the ungenial weather of May, the corn crops, as well as grass, had considerably advanced, and the start they have since made is almost miraculous. The meadows have a thick bottom-cover that cannot fail to prove a heavy crop, should sunshine still prevail. The wheat-crops, too, in the face of much nonsensical foreboding about them in certain quarters, have a vigorous, healthy appearance, and fully cover the ground: at any rate, this is the case in this district of the East Riding; and, from all we hear, we believe it to be so throughout Yorkshire, as well as in that portion of Lincolnshire bordering upon us. The same may be said of the barley and oat crops, except in poor soils. Of course it is too soon as yet, to speculate as to the amount of the average produce. We never remember to have seen bean crops look better.—*Hull Packet.*

**ADVERTISING.**—There is but one way of obtaining business—publicity; one way of obtaining publicity—advertisement: the newspaper is the flying-wheel by which motive power of commercial enterprise is sustained, and money the steam by which the advertising is kept going.—*Blackwood's Magazine.*

**PRESENT TO HER MAJESTY.**—On Thursday afternoon the General Steam Navigation Company's vessel the Princess Royal arrived at Blackwall from Hamburg, bringing four magnificent horses, three black and one grey, with Cossack attendants, who had come by that route from St. Petersburg, whence the horses had been sent by his Imperial Majesty the Emperor of Russia, as a present to her Majesty.

**VAN DIEMAN'S LAND.**—Timber has been discovered in Van Dieman's Land fit for flour-casks, equal to that of American oak in every respect; and more recently a description of timber has been found and made into oil-casks immediately it is taken out of the forest, without the slightest danger of shrinking or the loss of the oil in the warmest climates.—*Local Paper.*

**STEEL PENS.**—When these have been punched out of the softened sheet of steel by the appropriate tool, fashioned into the desired form, and hardened by ignition in an oven, and sudden quenching with cold water, they are best tempered by being heated to the requisite spring elasticity in an oil bath. The heat of this bath is usually judged of by the appearance to the eye; but this point should be correctly determined by a thermometer, according to a scale; and then the pens would acquire a definite degree of flexibility or stiffness adapted to the wants or wishes of the consumers. They are at present tempered too often at random.—*Ure's Arts, Manufactures, &c.*

**TEA.**—A curious return has been issued by order of the House of Commons (having been prepared on the motion of Mr. Hastie), showing the quantities of tea retained for home consumption in the United Kingdom in each year from 1740 to the termination of the East India Company's sales, and thence to the present time. In 1740, 1,493,625lbs. of tea were retained for home consumption. Two years afterwards the quantity fell to 473,868lbs.; and, in 1767, only 215,019lbs. were retained. Next year the amount increased to 3,150,517lbs.; in 1769, it was 9,114,845lbs.; in 1795, 21,342,855lbs.; and in 1836, 49,142,236lbs.—the largest amount in any one year retained for home consumption in the United Kingdom. In 1843, the quantity was 40,293,393lbs.; and last year, 51,363,770lbs. The return in question also specifies the quantity of the various kinds of tea, with the average sale prices. The nett receipt of duty on tea (Customs and Excise) last year was 4,524,193l.

**TO HAVE GREEN PEAS IN WINTER.**—Take the peas when they are plenty, shell them, wash and scald in hot water, then drain, put them into bottles, and pour on strong brine enough to cover; on this pour a thin layer of good salad oil, cork tight, then dip the corks into melted pitch. The bottles should be quite full, and kept upright.

**Muffins.**—Take 3 pints of flour, 1 pint lukewarm water, 1 teacup full of baker's yeast, 1 great spoonful of sugar, 1 teaspoonful of salt. Make up in the morning for tea, or at night for breakfast.



## SINGULAR TRAITS OF SONG BIRDS.

A gentleman of my acquaintance had an American mocking bird, that was either constantly singing, or else imitating the various sounds it heard. In order to try the powers of this bird, the owner purchased a fine sky-lark. When placed in the same room with the mocking bird, the song of the former was heard to echo through the house, as if it were chanting "on flutter wing," its well-known welcome to the rising sun. The mocking bird was silent for some time, but at last burst forth in the strains of the lark, but louder and clearer, as if mounting and stretching its wings towards heaven. The lark was silent from that moment, nor was a joyous note ever heard from it afterwards. Willing to test the powers of the mocking bird still further, an unusually large price was given for a blackbird, celebrated for its vocal powers. It was placed in the same room with the mocking bird. Early on the second morning its song was resumed, and its charming notes were warbled forth with all the sweetness and modulations which may be heard in its native thorny brakes. The mocking bird listened and was silent for a time; then all at once its notes were heard to issue forth, but sweeter and louder than those of the blackbird. The poor blackbird heard them, felt that it was conquered, remained silent, drooped, pined, and died. From the above facts, emulation would seem to be one of the causes of the songs of birds. When their powers are excelled, they appear to feel the disgrace of being conquered, and to lose all inclination to renew their former effort.—*Jesse's Country Life*.

**ARTIFICIAL STONE.**—A Mr. Ransome (of Ipswich,) after much patient research, has succeeded in maturing a plan for rendering stones, whether consisting of silex, granite, limestone, or marble, perfectly soft and malleable and which may, after being cast in moulds, be again rendered hard by the action of fire, and more durable than in their original state, by which process the most elaborate and beautiful designs are produced, equal in appearance to the works of the sculptor, and at a price which will render them easily attainable; it will stand all changes of atmosphere, and is exceedingly durable. Information has also reached us from a correspondent in the United States that an ingenious mason, named Hull (of Blainville,) has succeeded in producing a composition which is equal in appearance and durability to stone itself. Having had presented to him several specimens of the materials of the edifices at Yucatan, which have stood its humid climate for unknown centuries, and which were supposed to be stone, he analysed the substance, and has succeeded in perfecting a similar composition, which becomes excessively hard and durable, and superior to the best natural stone. With the same material he forms a wash for external walls, which is impervious to water, and protects materials with which it is covered from the action of fire, and for which he has been offered a large sum as purchase money; he can manufacture columns, pillars, &c., of this material, which, it is expected, will prove of important uses in building. Galvanism is employed in the production of the composition.

**NOVEL IMPORTATION.**—In consequence of the reduction of the duty on glass, it appears to be in contemplation to bring it into use for the roofing of houses. An importation of a thick description of window glass has already taken place, intended for roofing, and were it generally introduced those who require a strong light to enable them to carry on their occupations, might effect their object and avoid the window-tax. This roofing will be much lighter than tiles and slates, and if it be extended into the country, the poor will then be enabled to partake of the luxury of a bunch of black cluster grapes growing under the roofs of their own humble cottages. The glass will also be of great use to market gardeners, and it will serve for the roofing of green-houses.

**ROYAL AGRICULTURAL COLLEGE, CIRENCESTER.**—We are happy to hear that this important undertaking is receiving the support it so richly deserves. His Royal Highness Prince Albert has recently become patron and a governor of the college: and we consider that it behoves

every friend of an improved education for agricultural pursuits to rally round this attempt to found such an institution as will be adequate to the wants, and worthy of the great interest it is intended to serve. We understand that the buildings and preparations are so advanced that the college is expected to open for the reception of students in the course of the present year.

**PRICE OF BREAD.**—The bakers of this town last week reduced the price of the 4lb. loaf to fourpence halfpenny, and the best seconds is brought into the town at fourpence! This is "cheap bread" with a vengeance! nobody but the farmers has a right now to complain of the price of bread.—*Exeter Gazette*.

Mr. James Comins, of South Holton, exhibited his plough which won the prize last year, and which Earl Fortescue highly recommended, at the recent agricultural exhibition at Torrington. He also showed two other ploughs, which were materially improved, and which excited some attention.—*Western Times*.

All who have meditated on the art of governing mankind have been convinced that the fate of empires depends on the education of youth.—*Aristotle*.

**EGGS PICKLED.**—The farmer's daines in some parts of Hampshire, in their notable endeavours to turn everything to good account, have acquired much fame for pickling eggs which, whilst they constitute a somewhat novel feature in the catalogue of condiments generally, are at the same time particularly relishing. When eggs are plentiful, they take from four to six dozen of such as are newly laid, and cause them to be boiled hard; then, divesting them of the shells, they place them in large-mouthed earthen jars, and pour upon them scalded vinegar, well seasoned with whole pepper, allspice, ginger, and a few cloves of garlic. When the pickle is cold, the jars are stopped down quite close, and the eggs will be fit for use in the course of a month afterwards. The eggs thus treated are excellent, and are held in high esteem by all the farm-house epicures in that part of England.

**THE CROPS IN SCOTLAND.**—From the late rains and fine mild weather which have supervened these last ten days, together with the quantities of artificial manures applied to every species of crop, and the effects produced by the rain in bringing these into immediate action, we never saw this district of the county of East Lothian present so luxuriant an appearance at so early a period of the season. Each crop seems to vie with another in the promise of future plenty. Wheat will be in the ear in eight days; in some places it is far out of the *shot blade*. The hay crop is abundant, and the pastures are every where improved by the rains. Turnip sowing is rapidly progressing under the most favourable circumstances. The potatoes are generally vigorous in the stems, and although some partial failures are spoken of, still it is not nigh the extent of former years. Cattle markets, especially the beef, are still looking up.—*Berwick Warder*.

**THE WEATHER AND CROPS IN SCOTLAND.**—A cold cloudy atmosphere, with frequent high winds, prevents vegetation from making the rapid progress generally expected at this season of the year. The grain crops, however, although late, are generally healthy and strong, and, in many instances, rather too thick on the ground. Pastures, on the whole, are fresh, and have been much invigorated by the recent fall of rain. Potatoes, in so far as we have seen or heard of, have braided freely and vigorously and have not yet shown any tendency to disease. Excepting that the season is not an early one, the prospect as to the crop on the ground is, on the whole, highly favourable.—*Edinburgh Paper*.

**REASON AND KINDNESS.**—The language of reason unaccompanied by kindness will often fail of making an impression; it has no effect on the understanding because it touches not the heart. The language of reason unassociated with reason will frequently be unable to persuade; because though it may gain upon the affections, it wants that which is necessary to convince the judgement.—But let reason and kindness be united in a discovery, and seldom will pride and prejudice find it easy to resist it.—*Gisborne*.



**RESULTS OF A LITTLE NEGLECT.**—I was once, in the country, a witness of the numberless minute losses that negligence in household regulation entails. For want of a trumphy latch, the gate of the poultry-yard was for ever open; there being no means of closing it externally, 'twas on the swing every time a person went out, and many of the poultry were lost in consequence. One day a fine young porker made his escape into the wood, and the whole family, gardener, cook, milkmaid, &c., presently turned out in quest of the fugitive. The gardener was the first to discover the object of pursuit, and, in leaping a ditch to cut off his further escape, got a sprain that confine him to his bed for the next fortnight; the cook found the linen burnt that she had left hanging up before the fire to dry; and the milkmaid, having forgotten in her haste to tie up the cattle properly in the cow-house, one of the loose cows had broken the leg of a colt that happened to be kept in the same shed. The linen burnt and the gardener's work lost, were worth full twenty crowns, and the colt about as much more; so that here was a loss, in a few minutes, of forty crowns, purely for want of a latch that might have cost a few halfpence at the utmost; and this in a household where the strictest economy was necessary, to say nothing of the poor man, or the anxiety, and other troublesome incidents. The misfortune was, to be sure, not very serious, nor the loss very heavy; yet, when it is considered that similar neglect was the occasion of repeated disasters of the same kind, and ultimately the ruin of a worthy family, 'twas deserving of some little attention.—*From the French.*

**FINE PICKLE FOR MEAT.**—Brown sugar, bay salt, common salt, each 5 lbs.; saltpetre, 1 lb.; pimento (bruised) 5 ounces; black pepper (bruised) 3 ounces; nutmegs (rasped) 1 ounce; boiling water, five gallons. Mix. This not only imparts a fine red-colour to the meat, but also gives it a most delicious flavour.

**Incombustible Wash.**—Slack stone lime in a large tub or barrel, with boiling water, covering the tub or barrel, to keep in all the steam. When thus stacked, pass 6 quarts of it through a fine sieve. It will then be in a state of fine flour. Now, to six quarts of this lime add one quart of Rorer or Turk's Island salt, and one gallon of water; then boil the mixture and skim it clean. To every five gallons of this mixture, add one pound of alum, half a pound of copperas, by slow degrees, three-quarters of a pound of potash, and four quarts of fine sand or hard wood ashes, sifted. This mixture will now admit of any colouring matter you please, and may be applied with a brush. It looks better than paint, and is as durable as slate. It will stop small leaks in the roof, prevent the moss from growing over and rotting the wood, and render it incombustible from sparks falling upon it. When laid upon brick work, it renders it impervious to rain or wet.—*Emigrant's Hand Book.*

An experiment conducted by the President of an agricultural society in England, shows that manure which was kept covered by nine inches in depth of earth, so that no evaporation escaped, produced four bushels more of grain per acre, than the same quantity and kind of manure, applied to the same kind and extent of land, but which had lain from the 13th of Jan. to the 4th of April, exposed to the weather.

**White wash.**—There is nothing which so much improves the appearance of a house and premises as painting and whitewashing the tenement and fences.—The following wash has been found by experience to answer the same use as oil paint, and is much cheaper:

**Receipt.**—Take half a bushel of unslaked lime, and slack it with boiling hot water, covering it during the process. Strain it, and add a peck of salt dissolved in warm water, three pounds of ground rice boiled to a thin paste, put in boiling hot; half a pound of powdered Spanish whiting, and a pound of clear glue, dissolved in warm water. Mix, and let it stand for several days. Then put it in a kettle on a portable furnace, and apply it hot as possible, with a painter's or a whitewash brush.—*Selected.*

**Proposed Tunnel Through London.**—It is said Mr. Stephenson has suggested the construction of a tunnel from Hyde-park corner to Mile-end, for the purpose of easing the great leading thoroughfares of their present throng of passengers. From this trunk line communication would be had with the streets above by means of spiral staircases, under cover, at regular distances, and branch tunnels would lead off to the various suburbs north of the Thames, Regent's park, Highgate, Hampstead, Tottenham, &c.; in these tunnels railway omnibuses would run, and a journey from one end of London to the other might be accomplished in half an hour or forty minutes; while the streets above would be considerably cleared, and much of the present confusion prevented. Such a proposal may at first to many persons appear absurd, but the plan is undoubtedly practicable, and though enormously expensive, the nature of the soil (London clay) is favourable, and the great traffic which would arise would probably pay a moderate interest.

**"This is the way the Money Goes."**—In the year 1843, eight million or a thousand four hundred and forty-nine pounds, one shilling, and fourpence was spent by the people of this kingdom in tobacco! a tolerable round sum to "end in smoke." If the weed had been worked into pigtail, rather more than half an inch thick, it would have formed a line 93,470 miles long—long enough to go nearly five times round the world!

**A QUESTION FOR NATURALISTS.**—In the town of Neah, a cow, the property of Mr. W. Bromfield was milked for the long space of four years without one single failure in the yield of milk during that period. Will any of your correspondents account for the fact?—*W. A.*

The murrain amongst cattle has broken out with great violence in many parts of Scotland.

The deepest mining shaft in the world is one in the Tyrol, which is 460 fathoms, or 3,764 feet deep.

Speaking of the ravages of caterpillars, the Genesee Farmer asks—"What can people mean by losing a whole crop of fruit, destroying the health of their trees, and swarming the country with insects, when one day's labour of a man at the proper season would save all?"

Honey is, according to Mr. Milton, who has lately published a treatise on bees in England, a universal specific, and among its other valuable properties, he declares that it prevents consumption, and states that that destroyer of human life is not known in countries where honey is regularly taken as an article of food. Those who have less faith in the specific, may perhaps attribute the cause to difference of climate rather than to honey. The Italian singers, it is also affirmed, are greatly indebted to honey, but their practice is to sharpen it with a few drops of acid, though they sometimes take it in a pure state.—*Albany Cultivator.*

## The Canadian Agricultural Journal.

PUBLISHED MONTHLY,  
AT ONE DOLLAR PER ANNUM,  
PAYABLE IN ADVANCE.

Any Post Master or other individual who obtains six subscribers, to be entitled to one copy, gratis.

As the object of this Journal is to improve Canadian Husbandry, by the dissemination of the best and cheapest Agricultural Information, the charge for it will be simply sufficient to cover the necessary expense. The subscription price will therefore be Five Shillings per annum, to single Subscribers. Societies or clubs will be furnished at the following rates:—

50 copies for.....	\$30
25 copies for.....	15
10 copies for.....	8

Payable always in advance.

WILLIAM EVANS, EDITOR AND PROPRIETOR